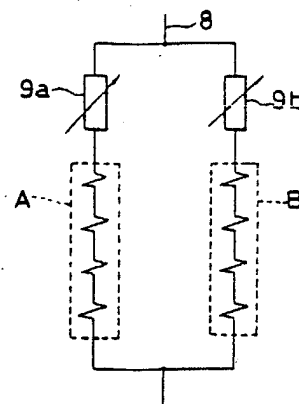


(54) EDDY CURRENT BRAKE DEVICE

(11) 60-128860 (A) (43) 9.7.1985 (19) JP
 (21) Appl. No. 58-233935 (22) 12.12.1983
 (71) TOSHIBA K.K. (72) MASAOKI OOKUBO
 (51) Int. Cl. H02K49/02

PURPOSE: To always obtain a constant sufficient brake force irrespective of the magnitude of a travelling speed of a vehicle by employing different and same polarity pole opposing types.

CONSTITUTION: When a brake is engaged while a vehicle travels at a high speed, the variable resistance value of a current controller 9a is set small and the variable resistance value of a current controller 9b is set large to flow many exciting current toward different polarity pole opposing exciting coil group A, and when the brake is engaged while the vehicle travels at a middle speed, it is set, contrary to the above, to flow the many exciting current in a direction of the exciting coil group B toward the same polarity pole opposing exciting coil group B. Then, the composite force of the brakes of the groups A and B become substantially constant in the full speed range, and sufficient brake force can be applied to the axle even at all speeds.

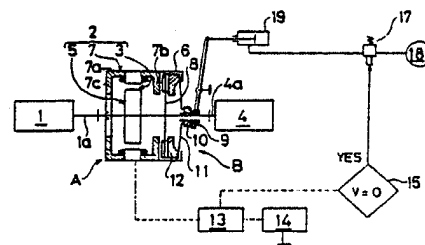


(54) ENERGY REGENERATIVE CLUTCH DEVICE

(11) 60-128861 (A) (43) 9.7.1985 (19) JP
 (21) Appl. No. 58-237244 (22) 15.12.1983
 (71) DAIKIN SEISAKUSHO K.K. (72) HIROTAKE FUKUSHIMA(2)
 (51) Int. Cl. H02K49/02, F16D13/00, H02K7/11

PURPOSE: To improve the utility efficiency of the output of an engine by producing electric energy by utilizing the relative slip between a drive unit and a driven unit of a clutch and supplementing the energy loss due to frictional heat.

CONSTITUTION: A relative rotation amount between the output shaft 1a of an engine and the input shaft 4a of a transmission is converted into electric energy by a generator 2 having a pair of a stator 3 and a rotor 5, and produced in a zone of differential range for producing a relative slip between a driving unit A and a driven unit B of a clutch. Since a battery 14 is charged by this energy, the utility efficiency of the output of the engine is improved to reduce the consumption of the energy.



(54) HORIZONTAL SHAFT SUPERCONDUCTIVE ROTOR

(11) 60-128862 (A) (43) 9.7.1985 (19) JP
 (21) Appl. No. 58-237059 (22) 15.12.1983
 (71) FUJI DENKI SOUGOU KENKYUSHO K.K. (72) SHINICHI NOSE
 (51) Int. Cl. H02K55/04

PURPOSE: To reduce the peripheral temperature difference even if coolant in a rotor is irregularly presented by internally providing a conductive conductor on the inner peripheral wall near holes at both ends of a cylindrical coolant vessel.

CONSTITUTION: A circular disc-shaped thermal conductor 15 made of copper or aluminum is provided inside a coolant vessel in contact with a flange 6a of a coil mounting shaft 6 at the end between a coolant vessel 3 and the shaft 6. The difference of upper and lower temperature of the shaft 6 to occur due to the invasion of heat from a torque tube can be equalized by the thermal conduction of the conductor 15 by providing such a conductor 15, and the difference of the upper and lower temperatures of the tube connected with the shaft 6 can be equalized.

